

Octaves of PI

A note vibrates a definite number of times per second. A note one octave above vibrates at twice that amount. Understanding the whole maths of music is a vital part of understanding how the whole universe works.

A note of "A" will be found at 55 Hertz and one octave above at 110 Hertz while the note of "A" one octave below 55 Hertz will be 27.5 Hertz. Octaves double the number of Hertz.

I made a recording of sounds which are not normal musical notes. They are all octaves based on multiples of PI.

Why PI?

Because the structure of the universe gives us PI and that same structure also gives us musical octaves.

I love that feeling of beginning to understand something about the structure of the universe.

A full concert level classical piano has 88 keys. The lowest note of "A" on that keyboard oscillates at 27.5 Hertz. One octave below that is 13.75 Hertz.

13.75 Hertz is a musical note of "A" which is lower than the classical piano can be bothered with and is classed in electronic music as an LFO (Low Frequency Oscillation).

13.75 Hertz is on the borderline between "Alpha Waves" (sleeping dreaming function of the nervous system) and "Beta Waves" (wide awake functions of the nervous system). The threshold of dreams. However the method of measurement is flawed by being based on "seconds" - an arbitrary unit of time. We would have more interesting results if they could be measured in units which are derived from the universe itself rather than being invented by humans.

The relationship of notes distanced from each other by octaves and by parts of an octave such as fifths are a real genuine relationship which comes to us from the nature of the universe itself and that's what I'm interested in. The relationship between the radius of the circle and the circumference of the circle (PI) is also from the nature of the universe itself. That relationship remains the same whether all we are talking about is a tiny circle on the head of a pin or a circle big enough to encompass whole galaxies.

The fact that these calculations help us to know more about all of the emotional effects of music and sound is of great interest to me.

Years ago I attended a pseudo-religious meeting led by some idiot who claimed that "*The soul vibrates at 32,000 times per second*".

Utterly ridiculous!!! 32,000 times per second (32 Khz) is an easily accessible radio frequency.

The "soul", on the other hand, is a very loose term for various concepts in religion and mysticism which vary in meaning from "psyche" to "mind" to "spirit" to "ghost" to "essence" to "astral body" to "atman" to almost whatever you want to make it. The combined sense of all these metaphysical ideas is of some poorly understood inner self which is usually considered to be of a different nature to physically measurable forms of matter and energy.

Therefore to attribute to it a measurable radio frequency is a nonsense delivered to an audience merely for mental titillation and pseudoscience. Madame Arcati could do better with a bit of table tapping and some fake ectoplasm.

Back here in the real world we need to understand and measure phenomena if we want to know what effect all of the harmonic forms and ratios of our music and art are having upon the audiences.